APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/442,363	11/17/1999	LARRY PEARLSTEIN	(DSML)HA-80(	5725

7590 10/06/2003	EXAMINER
STRAUB & POKOTYLO	PARSONS, CHARLES E
1 BETHANY ROAD	

ART UNIT	PAPER NUMBER
2613	

SUITE 56 BUILDING 4
HAZLET, NJ 07730

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	09/442,363	PEARLSTEIN ET AL.
Office Action Summary	Examiner	Art Unit
	Charles E Parsons	2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

No Information disclosure statement was included in the application, please submit a copy of the original

IDS upon reply to this action.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants

admitted prior art figure 1.

Claim 1 and 19: A method of decoding encoded :image data comprising the steps of:

operating a decoder circuit implemented in hardware to perform at least one non-memory

intensive image decoding operation to generate, from the encoded image data, a first set

of processed image data, the at least one non-memory intensive image decoding

operation being an operation in the group of operations consisting of a variable length

decoding operation an inverse scan conversion operation, and an inverse quantization

operation, (See Prior art figure 1 item 102)

supplying the first set of processed image data generated by the decoder circuit to a

programmable processor; and

operating the programmable processor to perform at least one additional image decoding

operation using the first set of processed image data. (While all of the elements in the

prior art picture are integrated or done in a hardware accelerator, to separate a function

that is clearly in the prior art is not patentable. See In RE Nerwin v. Erlichman, 168

USPQ 177, 179 (PTO Bd. Of Int. 1969). In other words simply separating the function of

the motion compensation unit and having it done by a programmable processor is not

patentable.

3.   Claims 1-9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants

admitted prior art in view of Purcell.

Claim 1, 19. A method of decoding encoded image data comprising the steps of:

operating a decoder circuit implemented in hardware to perform at least one non-memory

intensive image decoding operation to generate, from the encoded image data, a first set

of processed image data, the at least one non-memory intensive image decoding

operation being an operation in the group of operations consisting of a variable length

decoding operation an inverse scan conversion operation, and an inverse quantization

operation, See figure 1 of Applicants admitted prior art as well as Purcell column 3 lines

60-65

supplying the first set of processed image data generated by the decoder circuit to a

programmable processor; and (See column 3 line 66, all Purcells Processors are

programmable. See columns 33-156 wherein he shows the code used to program his

processors.)

operating the programmable processor to perform at least one additional image decoding

operation using the first set of processed image data. While the applicants prior art of

record does not use a programmable processor to separate the memory intensive

functions of the decoder, Purcell clearly does, See column 3 line 66. A motion

compensation step is an additional step and it is done in a separate processor from the

non-memory intensive steps. At the time the invention was made, it was well known in

the art that programmable processors could be used to carry out video data

manipulations such as MPEG decoding. It was also well known that in order to reduce

processing times, it was advantageous to split the decoding function into different blocks
and assign the tasks to different processors as taught by Purcell. Therefore it would
have been obvious to one of ordinary skill in the art, to use a dedicated processor for the
memory intensive steps in order to reduce the amount of time it takes to decode the
image.)

Claim 2: The method of claim 1, wherein the step of operating the decoder circuit, includes the
step of performing at least two additional operations from the group of operations
consisting of a variable length decoding operation, an inverse scan conversion operation,
an inverse quantization operation, an inverse discrete cosine transform operation, and a
data reduction operation, the two additional operations being different from said at least
one non-memory intensive operation. (See admitted prior art figure 1))

Claim 3 and 4. The method of claim 1, wherein the step of operating the decoder circuit further
includes: operating the decoder circuit to perform a data reduction operation. (This is the
purpose of decoders thus not a patentable element)

Claim 5. The method of claim 2, wherein the step of operating the programmable processor to
perform at least one additional image decoding operation includes the step of: operating
the programmable processor to perform a motion compensated prediction operation.
(See column 7 lines 63-65)

Claim 6: The method of claim 5, wherein the step of operating the programmable processor to
perform at least one additional image decoding operation further includes the step of:
operating the programmable processor to combine decoded image data produced by
performing the motion compensated prediction operation with decoded residual image
data to produce a set of decoded image data representing reconstructed pixels. (See
Purcell figure 1)

Claim 7. The method of claim 1, wherein the step of operating the programmable processor to

perform at least one additional image decoding operation includes the step of:

operating the programmable processor to combine decoded image data produced by

performing a motion compensated prediction operation with decoded intra-coded image

data to produce a set of decoded image data representing a complete frame. See

Purcell Figure 1)

Claim 8. The method of claim 2, wherein the programmable processor is coupled to a graphics

processor, the method further comprising the step of:

operating the graphics processor to perform a motion compensated prediction operation

using data included in the first set of processed data. (See Purcell figure 2)

Claim 9. The method of claim 8, wherein the step of operating the programmable processor to

perform at least one additional image decoding operation further includes the step of:

operating the programmable processor to combine decoded image data produced by

performing the motion compensated prediction operation with decoded residual image

data to produce a set of decoded image data representing reconstructed pixels. (See

figures 1,2 and 3 of Purcell)

Claim 10, 11, 12, 13. The method of claim 8, further comprising the step of storing in the decoder

circuit multiple sets of context information, each set of stored context information

corresponding to a different one of a plurality of encoded data streams processed by the

decoder circuit. (See Purcell column 17 line 44 through column 18 line 16.)

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Charles E Parsons whose telephone number is 703-305-3862. The examiner can normally

be reached on M-TH 7AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this

application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be

directed to the receptionist whose telephone number is 703-305-4750.

CEP   ANDY RAO
                                                                                 PRIMARY EXAMINER